WHAT IS CLAIMED IS:

1. A color-information processing method for performing pseudo-three-dimensional display in order to analyze color distribution, said method comprising:

a color-distribution-information input step, of inputting color-distribution information indicating color coordinate values that sample points in a first color system can have in a second color system;

a user's-instruction input step, of inputting an instruction of a user relating to an operation of generating object-surface information; and

a generation step, of generating three-dimensional-object-surface information in accordance with the instruction of the user, based on the color-distribution information.

2. A method according to Claim 1, further comprising:

a display-viewpoint/positional-information control step, of controlling at least one of a viewpoint, a line of sight, a position of an object, rotation of the object, a position of a screen, and an angle of the screen, in accordance with the instruction from the user; and

a display control step, of controlling pseudo-three-dimensional display of the three-dimensional-object-surface information, based on display-control information including at least one of viewpoint information, line-of-sight information, object-position information, object-rotation information, screen-position information and screen-angle information by display-viewpoint/positional information control means.

3. A method according to Claim 1 or 2, wherein the first color system and the second color system are different ones of an RGB color system, a CMY color system, an XYZ color system, an Luv color system and a Lab color system.

4. A method according to Claim 1, wherein the sample points are regularly placed in the form of a grid in the first color system.

5. A method according to Claim 1, wherein in said user's instruction input step, the user instructs a range of a grid to be displayed for each color component in the first color system, and wherein in said generation step, the three-dimensional-object-surface information is generated based on color coordinates of the sample points within the assigned range of grids to be displayed in the second color system.

6. A method according to Claim 1, wherein in said user's-instruction input step, the user instructs a number of internal grid layers by using outermost grids as a reference, and wherein in said generation step, the three-dimensional-object-surface information is provided based on color coordinates of sample points in the second color system which are generated by deleting both ends of a maximum grid range in the first color system in accordance with the assigned number of internal grid layers.

7. A method according to Claim 1, wherein a number of grids of each three-dimensional base in arrangement of sample points on grids in the first color system is the same, and a grid step is the same in each base, and

wherein in said generation step, the three-dimensional-object-surface information is generated by providing a tetrahedron having four vertices, which are an origin of grids, an outermost grid point diagonal with respect to the origin, and adjacent grid vertices selected based on a range of hues to be displayed, and obtaining color coordinates of sample points on a surface of the tetrahedron region in the second color system.

8. A method according to Claim 1, wherein the three-dimensional-object-surface information is provided as a set of triangular patches, which are selected so as to maximize a volume of a three-dimensional object from among two types of combinations of triangular patches in a minimum quadrangle configured by grid points.

9. A method according to Claim 1, wherein the three-dimensional-object-surface information includes a plurality of sets of surface information, and wherein display/non-display can be arbitrarily controlled for each set of surface information, based on preset display-surface-selection information.

10. A method according to Claim 1, wherein instructions of the user include an instruction to assign a type of a display mode, and wherein display modes include point-model display, wire-frame-model display, polygon-model display, and smooth-shading display.

11. A method according to Claim 1, wherein when performing pseudo-three-dimensional display of the three-dimensional-object-surface

information, a color of a surface of a three-dimensional object is controlled in accordance with color coordinates of sample points in the first color system.

12. A method according to Claim 1, wherein when performing pseudo-three-dimensional display of the three-dimensional-object-surface information, a color of a surface of a three-dimensional object is controlled in accordance with color coordinates of sample points in the second color system.

13. A method according to Claim 1, wherein the color-distribution information is provided by performing gamut mapping for sample points arranged in the first color system, and acquiring color coordinate values of said sample points in the second color system.

14. A method according to Claim 1, wherein the color-distribution information is provided by performing perception adaptation processing for sample points arranged in the first color system, and acquiring color coordinate values of said sample points in the second color system.

15. A program for executing a color-information processing method for performing pseudo-three-dimensional display in order to analyze a color distribution, said program comprising:

a color-distribution-information input step, of inputting color-distribution information indicating color coordinate values that sample points in a first color system can have in a second color system;

a user's-instruction input step, of inputting an instruction of a user relating to an operation of generating object-surface information; and

a generation step, of generating three-dimensional-object-surface information in accordance with the instruction of the user, based on the color-distribution information.